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No. 11

Internal Migration

A STUDY OF THE FREQUENCY OF
MOVEMENT OF MIGRANTS

by

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HER MAJESTY'S STATIONERY OFFICE

An earlier publication in this series in 1951 (Number 5) on Internal Migration made a beginning with the analysis of new material on movements of people within the country which was thrown up during the operation of the National Register. This Register, which was begun in September 1939 and was discontinued early in 1952, provided for the first time a precise and detailed record of the millions of movements of individuals into and out of local administrative areas. Before that, information about internal migratory movements had been (and is once again) limited in the main to figures for each area of net loss or gain by migration which can be derived from the decennial censuses together with the local registrations of births and deaths.

Study Number 5 analysed the new material in terms of the total number of movements recorded between local administrative areas, more detailed attention being given to 27 selected areas. The present study concentrates attention rather upon the individuals whose movements made up the totals previously investigated, in order to find out the extent to which individuals had contributed more than one movement to the total. It is based on a sample which was drawn early in 1951 from the records in the National Register covering the three years 1948-1950.

Some further work was also carried out on the material available for the three years 1948-1950. It is in the form of an analysis of a 10 per cent sample (extracted in early 1951 on to cards similar to those described on page 2) of movements in respect of 389 administrative areas or groups of areas based on the Board of Trade's division of the country into research districts. The resulting statistical material is too bulky for publication. It may, however, be consulted in the Department's library.

General Register Office,
Somerset House,
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INTERNAL MIGRATION

A study of the frequency of movement of migrants

This Study, which relates to the period 1st January, 1948, to 31st December, 1950, is intended to be supplementary to the Study Number 5, entitled Internal Migration—Some Aspects of Population Movements within England and Wales, by Mary P. Newton, M.A., and James R. Jeffery, which was published in this series in 1951. That study, after describing the historical development of internal migration, analysed the characteristics of internal migration between 1947 and 1951 as shown by National Registration statistics. It described the total volume of movement within England and Wales, and a number of areas were selected for detailed study of the distance of moves, and of the sex and age distribution of the migrants into and out of these selected areas.

The whole of that analysis was carried out in terms of total "in-moves" and "out-moves" and the writers considered it (page 39) deficient in one important respect, in that it failed to indicate the extent to which the same persons were recorded in more than one move. It did not show whether four million moves in a year represented four million people each moving once, or a smaller number of people, some of whom moved more than once. Nor could it indicate whether the four million who moved last year were entirely different people from those who moved the year before. This study fills part of these gaps.

This analysis is based on a sample drawn in 1951, relating to the three years 1948-1950, during which every civilian had an identity card, and on making a permanent move, or a change of address involving a change in food retailer, was required to notify the local National Registration/Food Office. In using these derived statistics it is reasonable to suppose that a move would be recorded as permanent if the person moved to a new area to reside, and remained there for at least six weeks. Notifications to the Central National Registration Office by local National Registration Officers included only moves across local authority boundaries, and it is to these non-local moves that the data used here refer.

The data on which this study is based was a 1 in a 1,000 sample of the entries in the various parts of the National Register, those selected being copied on to cards, one for each person, details being restricted to those given below; no particulars identifying individuals as such were needed for this analysis. The main part of the register contained particulars of all civilians living in England and Wales on 29th September, 1939. The selection of the sample from this part of the register was carried out in 1951 by taking one out of every hundred of the books into which the particulars had been transcribed—starting with the 50th and then taking the 150th, 250th and so on. From each selected book, every 10th page was selected, starting with the 5th in the first selected

book, and thereafter taking the 15th, 25th and so on. The selected books were treated as continuous; that is, there was a carry-over in page selection from one book to the next. All entries on any selected page were included in the sample, partly filled pages took their normal place in the sample, but completely blank pages were excluded. A sample was also taken of the other parts of the register which included entries for persons demobilised from the armed forces, new entrants into the country, and those persons whose original identity cards had been replaced. From these parts all entries whose National Registration number ended in 500 were selected. Owing to a process being carried on at the time on that part of the register comprising children who had been born after 29th September, 1939, it was, unfortunately, not practicable to take a sample from this group; this gave rise to a deficiency in the sample of those aged under 15. Only 5·9 per cent of the migrants selected in the sample were under 15 on 31st December, 1950, compared with 22·2 per cent of the civilian population of England and Wales, as estimated by the Registrar General at 30th June, 1950.

The selected entries were then scanned and those relating to migrants identified. For the purpose of the sample a migrant was defined as:

- (a) a civilian resident in England and Wales for the whole of the period 1st January, 1948, to 31st December, 1950, and who had one or more recorded movements within England and Wales during that period, or
- (b) an immigrant from abroad during this period who remained in England and Wales until 31st December, 1950, in a civilian status the whole time.

The particulars of migrants entered on the cards were:

- (i) Sex
- (ii) Year of birth
- (iii) Area of residence on 31st December, 1947, or,
Year of entry for those immigrating after 31st December, 1947
- (iv) Area and date of all recorded movements between 1st January, 1948, and
31st December, 1950, inclusive
- (v) For women who had married since 1939, the date and area of marriage

In Table 1 the data have been tabulated by age, at 31st December, 1950, and by number of moves during the period from 1st January, 1948, to 31st December, 1950. Sections of this Table give details for persons, males, females with a marriage entry, that is, who had married since September 1939, and females with no such marriage entry. The number of persons moving 1, 2, 3, and 4 or more times are given, together with their percentage equivalents of the total in each sex-age group. The average number of moves per migrant in each group has been calculated, and is shown together with the standard error. In computing these statistics those moving "4 or more" times were regarded as moving 4 times; this lowers the average, an effect which may be especially marked for males, where the numbers moving 4 or more times are high compared with the number moving 3 times.

Table 1. One per thousand sample. Number of non local migrants in England and Wales, 1948-50, by sex, age and number of moves

Group	Age of migrant on 31st December, 1950	Migrants with number of moves						Average number of moves (Standard error in brackets)	
		1		2		3			
		No.	Percent	No.	Percent	No.	Percent		
Persons	under 15	1,187	67.0	63	22.6	24	8.6	1.8	
	15-29	1,032	57.1	428	23.6	198	10.9	1.811	
	30-44	881	62.7	311	22.1	124	8.8	1,406	
	45-59	442	64.5	167	24.4	42	6.1	685	
	60 and over	371	66.7	125	22.4	37	6.6	557	
	Total	2,913	61.4	1,094	23.1	425	9.0	306	
Males	under 15	103	66.1	35	22.4	17	10.9	1	
	15-29	429	60.2	134	18.8	71	10.0	78	
	30-44	449	60.7	165	22.3	64	8.7	61	
	45-59	206	63.2	83	25.5	18	5.5	19	
	60 and over	131	67.6	41	21.1	14	7.2	8	
	Total	1,318	61.9	458	21.5	184	8.7	167	
Females with a marriage entry	under 15	1529	58.5	112	22.9	59	12.1	32	
	30-44	146	67.5	38	17.6	20	9.3	12	
	45-59	24	64.9	10	27.0	2	5.4	1	
	60 and over	5	71.4	2	28.6	0	0	0	
	Total	461	61.6	162	21.6	81	10.8	45	
								60	
Females with no marriage entry	under 15	84	68.2	28	22.8	7	5.7	4	
	15-29	317	52.1	182	29.8	63	11.1	43	
	30-44	286	63.4	108	23.9	40	8.9	17	
	45-59	212	65.9	74	23.0	22	6.8	14	
	60 and over	235	66.0	82	23.0	23	6.5	16	
	Total	1,134	60.9	474	25.5	160	8.6	94	
								50	

The sample, which covered the period from 1st January, 1948, to 31st December, 1950, comprised 4,738 persons, which implies a total number of migrants of the order of 4,740,000 for the three-year period. Due to the lack in the sample of children born later than September 1939, these migrants would nearly all be aged 10 or over by the mid-point of the period under investigation, mid-year 1949. The Registrar General estimated the civilian population of England and Wales aged 10 or over at 30th June, 1949 to be 36,423,000, which implied that about 13 per cent of the estimated population moved during the three-year period.

From Table 1 it can be seen that of the migrants 44·9 per cent were males 15·8 per cent were females with a marriage entry, and 39·3 per cent were females without a marriage entry.

Of all persons moving during the three-year period 61·4 per cent moved once only, 23·1 per cent twice, 9 per cent three times and 6·5 per cent four or more times. There was little variation in these proportions among the sex groups without regard for age, but if age is taken into account more variation occurred.

When all migrants are classified according to age and compared with the Registrar General's estimate of the civilian population of England and Wales at 30th June, 1950, the following comparison emerges for persons. As nearly all the under 15 age group were, by December 1950, aged at least 11, the comparison has been made with the population aged 11 and over.

Age	Population (thousands)		Migrants	
	Number	Per cent	Number	Per cent
11-14	2,272	6·3	279	5·9
15-29	8,736	24·2	1,811	38·1
30-44	9,795	27·2	1,406	29·7
45-59	8,312	23·1	685	14·5
60 and over	6,927	19·2	557	11·8
Total aged 11 and over	36,042	100·0	4,738	100·0

There was a considerable proportionate excess of migrants for the 15-29 and 30-44 age groups, and corresponding deficiencies in the other age groups. The ages from 15 to 45 accounted for just over two thirds of the migrants, while containing only a little over a half of the population. Persons aged 15 to 29 accounted for 38 per cent of the total number of migrants and those aged 30 to 44 for 30 per cent.

For all persons 67·9 per cent of moves took place between the ages of 15 and 45 and there were similar proportions for males (68·2 per cent) and all females (67·6 per cent). If the females are divided according to marriage entry then the proportion of moves between 15 and 45 for females without a marriage entry

falls to 57 per cent, that for females with a marriage entry rising to 94·1 per cent—the latter being due to the concentration of marriages in the 15-29 age group, which group alone accounted for nearly two thirds of the moves of the females with a marriage entry.

The main features of the distribution of migrants by number of moves are shown by the averages given for each sex-age line of Table 1, together with their standard errors, which enable tests of significance to be made, and when this is done fairly well marked features appear.

The average moves per migrant for those under 15 were in all groups significantly (at the 5 per cent level) lower than the average for that group. This was partly due to the bias in the sample since only children born before October 1939 are included (apart from a few children of immigrants), who by 1950 would be between 11 and 15 years old and who would therefore tend to come from longer established families, whose parents would be included in the 30-44 age group rather than the 15-29 age group. Also children of this age are likely to be a handicap to migration, partly because of the wish of parents for their children to have a settled education.

Apart from females with a marriage entry, the average moves per migrant in age group 15-29 were significantly higher than the overall average. With reference to the number of migrants, and the number of moves, the 15-29 age group represented a well marked peak. While the average for females with a marriage entry did not differ significantly from the overall average of 1·60 moves per migrant, it was significantly higher than the average number of moves for this group at later ages.

At ages 30-44 there were no significant differences from the overall average. In the age group 45-59 the figures for males and for females with a marriage entry showed no significant deviation, but those for all persons and for females without a marriage entry were lower than average by a significant amount. This difference in the groups may well indicate the influence of marriage at a relatively late age upon migration.

In the age group composed of those aged 60 and over, all the averages were significantly lower than the overall average; this was to be expected, since at these ages homes have become long established and there is a tendency to cling to familiar surroundings.

The general evidence given by Table 1 confirms the belief that people are more mobile at the early adult ages, when they are perhaps not finally settled in their trade or profession and often before they have married or begun to have families.

Table 2. One per thousand sample. Migrants within England and Wales, 1948-50. Interval between First and Second moves of migrants. Migrants making their first move between 1st January, 1948, and 31st December, 1948

Group	Interval between First and Second Moves						Total	Average length of interval (months)		
	Under 6 months		6-11 months		12-23 months					
	No.	Per cent	No.	Per cent	No.	Per cent				
Males	195	43.3	112	24.8	110	24.4		
Females	251	43.4	154	26.7	115	19.9		
" (with marriage entry)	91	48.4	47	25.0	36	19.2		
" (without marriage entry)	160	41.0	107	27.4	79	20.3		
Persons	446	43.3	266	25.9	225	21.9		
							92	8.9		
							1,029	10.0		

Table 2 sets out figures indicating the rapidity of movement among migrants. The data are in the form of length of interval between first and second moves within the three-year period, being limited to persons who made their first move in 1948. The total number in the sample who fulfilled these conditions was 2,019, of whom 990 (49 per cent) made no second move, and who are therefore excluded from Table 2, as are persons not living in England and Wales on the 31st December, 1947.

Figures are given of actual numbers and percentage equivalents of migrants for whom the length of time between first and second moves fell into the intervals: under 6 months, 6 to 11 months, 12 to 23 months, and 24 to 35 months. The average interval between first and second moves for each sex group was calculated. To obtain the averages each of the later intervals was divided into sub-intervals, the 12-23 months interval being divided into 12-17 months and 18-23 months, and the 24-35 months interval being divided into 24-29 months and 30-35 months, the numbers falling into each interval being split between the sub-intervals by means of graphical interpolation. The averages were then calculated using mid-points of the sub-intervals so obtained. The effect of this was to reduce the absolute value of the averages but the relative positions of the sex groups remained unaltered.

The percentage figures show that for all migrants moving more than once within the three-year period, 43·3 per cent made their second move less than six months after their first and nearly 70 per cent did so within a year of their first move.

The average interval between first and second moves was 10·0 months, while the values of the averages for males and all females were equidistant from it, being for males 9·9 months and for females 10·1 months.

Dividing the females into those with and those without a marriage entry shows up a clear difference, the average for females without a marriage entry rising to 10·6 months and that for females with a marriage entry falling to 9·2 months. While the difference between these is not statistically significant it does indicate a shorter interval among the more recently married. Of those with a marriage entry 48·4 per cent moved for a second time within 6 months of their first move, compared with 41 per cent among those with no marriage entry.

Tables 3 and 4 give figures on a regional basis. Each migrant was classified according to the administrative area in which he was residing on 31st December, 1947, and from these figures data on a regional basis were produced by combining the figures for each area into figures for the standard regions normally used in the Registrar General's publications.

Table 3. One per thousand sample. Migrants within England and Wales, 1948-50. Number of moves per migrant for each of the standard regions of England and Wales—Persons

Region	Per cent of England and Wales Population 1950	Migrants with number of moves						Average moves per migrant (Standard error in brackets)	
		1		2		3		No. Per cent	Total (Per cent of England and Wales)
		No. Per cent	No. Per cent	No. Per cent	No. Per cent	No. Per cent	No. Per cent		
Northern East and West Ridings	7.2 9.4	101 236	51.0 65.0	56 83	28.3 22.9	23 29	11.6 8.0	18 15	9.1 4.1
North Western North Midland Midland Eastern London and South Eastern	14.7 7.7 10.1 7.1 25.0	317 188 206 178 878	61.7 66.2 60.6 67.2 64.5	124 56 82 56 289	24.2 19.7 24.1 21.1 21.2	46 19 24 16 125	9.0 6.7 7.1 6.0 9.2	26 21 28 15 69	5.1 7.4 8.2 5.7 5.1
Southern South Western Wales England and Wales	6.0 6.9 5.9 100.0	163 199 131 2,597	56.4 63.8 57.4 62.5	76 62 61 945	26.3 19.9 26.8 22.8	27 34 20 363	9.3 10.9 8.8 8.7	23 17 16 248	8.0 5.4 7.0 6.0
								1,361	32.7
									1.55 (-02)

Table 3 shows for each region the number of migrants during the 1948-50 period who were residing in the region on 31st December, 1947, and who made 1, 2, 3, and 4 or more moves. Percentage equivalents of these numbers are given, and the average number of moves per migrant for each region, together with its standard error, have been calculated.

The total number of migrants of each region has been expressed as a percentage of the England and Wales total. When this percentage is compared with the percentage of the estimated population of each region in 1950, the most notable feature is the difference shown in the London and South Eastern region, which supplied 32.7 per cent of the migrants but only 25.0 per cent of the population. The only other regions which show a higher proportion of migrants than population are the Southern and South Western regions.

The average number of moves per migrant ranged from 1.50 for the Eastern region to 1.79 for the Northern. The difference in average between those regions shows up in the two percentage distributions of migrants making a given number of moves; 67.2 per cent of migrants of the Eastern region made only one move compared with 51.0 per cent of Northern region migrants, while the Northern region had proportionally twice as many migrants making three moves as the Eastern region.

If the differences in regional averages are taken with their standard errors certain statistically significant differences emerge. The Northern and Southern region averages were significantly higher than the England and Wales average. The Northern region average was significantly higher than the averages of all but the Southern and Midland regions, and Wales, while the Southern region differed significantly from the London and South Eastern, East and West Ridings and Eastern regions.

In order to examine more closely the regional differences shown up by the distributions for persons, similar tables to Table 3 were constructed for males, all females, females with and without a marriage entry. The results are summarised in Table 4, which gives the average number of moves per migrant for each region and for each sex group. With each average is given the order taken by that region in the ranked order for that group, 1 representing the region with the highest average moves per migrant and 10 the region with the lowest moves per migrant. For each group the England and Wales average for that group is also given.

For all groups there was a tendency for the Northern, Southern, and Midland regions, and Wales, to have a high average number of moves per migrant, and for the Eastern, East and West Ridings, and London and South Eastern to have low average moves per migrant. Certain features of interest show up when male and female distributions are separated. There was a clear contrast between the averages for the North Midland, and East and West Ridings regions for males and for all females. In the all female column these two regions occupied the two lowest positions and had low average moves which extend the female range of average values below that of males. For males these two regions occupied third and sixth positions respectively. While the differences between the averages by sex were not significant, the contrast shows up in two distributions which otherwise are very similar. It is interesting to note that when all females were divided

Table 4. One per thousand sample. Migrants within England and Wales, 1948-50. Average number of moves per migrant for each of the standard regions—Persons, Males, Females, and Females with and without marriage entry

Region	Persons		Males		All		Females		Without marriage entry	Rank*
	Average number of moves	Rank	Average number of moves	Rank	Average number of moves	Rank*	Average number of moves	Rank*		
Northern	1.79	1	1.80	1	1.78	1	1.67	2	1.83	1
East and West Ridings	1.51	9	1.59	6	1.45	10	1.57	8	1.37	10
North Western	1.57	6	1.57	7	1.58	6	1.61	5	1.57	6 [‡]
North Midland	1.55	8	1.66	3	1.46	9	1.59	6	1.40	9
Midland	1.63	4	1.60	5	1.65	4	1.75	1	1.60	4
Eastern	1.50	10	1.51	10	1.49	8	1.50	9	1.49	8
London and South Eastern	1.55	7	1.53	9	1.57	7	1.57	7	1.57	6 [‡]
Southern	1.69	2	1.72	2	1.67	2 [‡]	1.62	3 [‡]	1.69	3
South Western	1.58	5	1.55	8	1.60	5	1.62	3 [‡]	1.59	5
Wales	1.65	3	1.63	4	1.67	2 [‡]	1.47	10	1.76	2
England and Wales	1.58	..	1.59	..	1.58	..	1.59	..	1.57	..

*Ties are given the mean of the ranks in question; thus, where two areas have equal average number of moves which would rank them both second, they are given the rank of 2½ (the mean of 2 and 3) and the next area is ranked 4.

according to marriage entry, the averages for females with no marriage entry were of the same rank as for all females for these two regions, while the figures for females with a marriage entry corresponded more closely to the male figures. Both these regions are characterised by an adequate demand for female factory workers, and there has therefore been less incentive to move in search of a job.

Perhaps the outstanding feature shown up by the division of females into those with and those without a marriage entry is produced by Wales, which is ranked tenth for females with a marriage entry but second for females without a marriage entry. This may well reflect lack of opportunities for female employment in large areas of Wales, and consequently a large amount of movement in search of employment and suitable living accommodation.

Summary

The general points shown by this study may be very briefly reviewed. About 13 per cent of the population moved during the three-year period. Table 1 shows that the frequency of migration is such that, taken overall, within a three-year period every migrant makes 1·6 moves, or that on average every 8 moves represent 5 different persons moving. There is a very clear effect of age upon frequency of migration, both the number of migrants and the number of moves each makes being at a maximum during the early adult ages. Marriage has an effect upon migration, but probably nothing like as great an effect as the search for employment. The latter probably accounts for a large part of the regional differences shown up by Tables 3 and 4, where the consistently high rates of movement in the Northern and Southern regions and Wales are probably due to lack of employment opportunities within a region, or the concentration of such opportunities in one part of a region, or in areas a short distance outside the region. Table 2 gives a clear indication of the rapidity of movement among those who move more than once.